

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended) A cell search method for a mobile station in a mobile communication system, the method comprising a first step of despreading a received signal using a common spreading code common to all slots and detecting slot boundaries on the basis of a first average correlation coefficient, a second step of despreading the signal on the basis of said slot boundaries detected at the first step, using different individual spreading codes for said respective slots, and detecting frame boundaries and a scramble code group on the basis of a second average correlation coefficient, and a third step of descrambling a common pilot signal on the basis of said frame boundaries and scramble code group detected at the second step, and detecting a scramble code on the basis of a third average correlation coefficient, the method being characterized in that:

the average or median of the average correlation values excluding the largest one is calculated, said average or median being a reference value corresponding to an interference power,

the detection results for said frame boundaries and scramble code are judged on the basis of a ratio of the largest one of a plurality of said ~~[[third]]~~ average correlation coefficients to a ~~predetermined reference value~~ said interference power.

Claim 2. (Cancelled).

Claim 3. (Original) The cell search method for a mobile station in a mobile communication system according to Claim 1, characterized in that said reference value is set on the basis of said a plurality of third average correlation coefficients except the largest one thereof.

Claim 4. (Cancelled).

Claim 5. (Original) The cell search method for a mobile station in a mobile communication system according to Claim 1, characterized in that said reference value is set on the basis of a plurality of said second average correlation coefficients except the largest one thereof.

Claim 6. (Cancelled).

Claim 7. (Original) The cell search method for a mobile station in a mobile communication system according to Claim 1, characterized in that said reference value can be set on the basis of a plurality of said first average correlation coefficients.

Claim 8. (Cancelled).

Claim 9. (Currently Amended) A cell search method for a mobile station in a mobile communication system, the method descrambling a common pilot signal on the basis of information on known scramble codes and frame boundaries, and detecting a scramble code on the basis of an average correlation coefficient, the method being characterized in that:

the detection results for said frame boundaries and scramble codes are judged on the basis of a ratio of the largest one of a plurality of said average correlation coefficients to a predetermined reference value, said predetermined reference value being an average or a median of a plurality of said average correlation coefficients except the largest one thereof.

Claims 10-12. (Cancelled).

Claim 13. (Currently Amended) A cell search apparatus for a mobile station in a mobile communication system, the apparatus comprising a first detector for despreading a received signal using a common spreading code common to all slots and detecting slot boundaries on the basis of a first average correlation coefficient, a second detector for despreading the signal on the basis of said slot boundaries detected at the first step, using different individual spreading codes for said respective slots, and detecting frame boundaries and a scramble code group on the basis of a second average correlation coefficient, and a third detector for descrambling a common pilot signal on the basis of said frame boundaries and scramble code group detected at the second step, and detecting a scramble code on the basis of a third average correlation coefficient, the apparatus being characterized by comprising:

~~judgement~~ judgment means for calculating the average or median of the average correlation values excluding the largest one, said average or median being a reference value

corresponding to an interference power, and for judging the detection results for said frame boundaries and scramble code on the basis of a ratio of the largest one of a plurality of said [[third]] average correlation coefficients to a ~~predetermined reference value~~ said interference power.

Claim 14. (Cancelled)

Claim 15. (Currently Amended) The cell search apparatus for a mobile station in a mobile communication system according to Claim 13, characterized in that said reference value is set on the basis of ~~said~~ a plurality of third average correlation coefficients except the largest one thereof.

Claim 16. (Cancelled).

Claim 17. (Original) The cell search apparatus for a mobile station in a mobile communication system according to Claim 13, characterized in that said reference value is set on the basis of a plurality of said second average correlation coefficients except the largest one thereof.

Claim 18. (Cancelled).

Claim 19. (Original) The cell search apparatus for a mobile station in a mobile communication system according to Claim 13, characterized in that said reference value can be set on the basis of a plurality of said first average correlation coefficients.

Claim 20. (Cancelled).

Claim 21. (Currently Amended) A cell search apparatus for a mobile station in a mobile communication system, the apparatus descrambling a common pilot signal on the basis of information on known scramble codes and frame boundaries, and detecting a scramble code on the basis of an average correlation coefficient, the method being characterized by comprising:

~~judgement~~ judgment means for judging detection results for said frame boundaries and scramble codes on the basis of a ratio of the largest one of a plurality of said average correlation coefficients to a predetermined reference value, said predetermined reference value being an average or a median of a plurality of said average correlation coefficients except the largest one thereof.

Claims 22-24. (Cancelled).